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MICROSATELLITE TYPING OF *ECHINOCOCCUS MULTILOCULARIS* FROM NATURALLY INFECTED DANISH AND SWEDISH RED FOXES (*VULPES VULPES*)

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Introduction

Fragment size analysis of the EmsB microsatellite marker has been used for genetic fingerprinting of *Echinococcus multilocularis*. In this study we applied this method to Danish and Swedish isolates from foxes. The aim was to gain more knowledge concerning possible recent introduction and potential source(s) of the parasite.

Materials and Methods

Five to seven *E. multilocularis* from each of 17 red foxes (*Vulpes vulpes*) collected between 2010 and 2014 in Denmark and Sweden were subtyped using the EmsB microsatellite marker. A subtype also present in other European countries was named profile E if found in one, and profile P if found in more than one worm within the study. Subtypes only detected in one worm in the study was named a unique type (U).

Results

Seventy-four worms were subtyped, 34 worms from seven Swedish foxes from three different areas and 40 worms from 10 Danish foxes from two areas. In Højer (Denmark) profile (P6) dominated but two other types were also present (E1, U1) while two profiles were detected in Grinstedt (P2, P4). In Västra Götaland (Sweden) one profile (P5) was seen, whereas in the other areas variation was larger both within areas and within foxes: Södermanland (P2, P3, E2, U4, U5), Dalarna (P1, P3, U2, U3).

Conclusion

The majority of subtypes identified in the study have previously been detected in other parts of Europe. It cannot be concluded if or when introduction occurred. However, if *E. multilocularis* was introduced the origin was most probably European.